

Abstract Of the Disclosure

A modular fuel injector that includes a coil group subassembly and a valve group subassembly. The coil group subassembly is independently testable. The valve group subassembly is independently testable and includes a tube assembly having a longitudinal axis extending between a first tube end and a second tube end, and a seat assembly disposed in the tube assembly proximate the second tube end. The seat assembly includes a flow portion and a securement portion. The flow portion extends along the longitudinal axis between a first surface and an orifice disk retention surface at a first length. The flow portion has a seat orifice extending therethrough and an orifice disk coupled to the orifice disk retention surface so that the orifice plate is aligned in a fixed spatial orientation with respect to the flow portion. The securement portion extends along the longitudinal axis away from the orifice disk retention surface at a second length greater than the first length. A method of maintaining a fixed spatial orientation and dimensional symmetry of at least one of the seat and orifice disk in the valve subassembly is disclosed.